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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,188	12/27/2000	Tadayoshi Iijima	P107424-00019	2973

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EXAMINER

UHLIR, NIKOLAS J

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/748,188	Applicant(s) IIJIMA, TADAYOSHI	
	Examiner Nikolas J. Uhler	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) none is/are allowed.
- 6) ☒ Claim(s) 2,3 and 8 is/are rejected.
- 7) ☐ Claim(s) none is/are objected to.
- 8) ☐ Claim(s) none are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment/request for continued examination (RCE) dated 1/21/03. It is noted that claims 2-3 and 8 are pending.
2. Applicant's requirement in claim 8 that the final product compressed layer contain a specific amount of resin renders the rejections of the prior office actions untenable. Those rejections are hereby withdrawn. A new office action on the merits follows.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 8 and 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is noted that example 1 of the instant specification utilizes acrylic as the impregnated transparent material. Thus, it is unclear to the examiner whether the parts by volume requirement in the claim is intended to only apply to the resin binder, or whether it is intended to also limit the volume of the transparent impregnated substance when a resin such as an acrylic is impregnated into the film. Clarification is required.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 8 and 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yukinobu et al. (US5411792).

Art Unit: 1773

7. Regarding the limitations of claim 8 wherein the applicant requires a transparent conductive film comprising a compressed layer on a support, wherein the compressed layer contains conductive particles and a resin binder, wherein the amount of resin is 0.03-9.3 parts by volume with respect to 100 parts by volume of the conductive particles, wherein the compressed layer is formed by compressing the conductive particles and the resin on the support, and the compressed layer further comprises an impregnated transparent substance.

8. The examiner interprets the limitation, "the amount of resin is 0.03-9.3% by volume with respect to 100 parts by volume of said conductive particles" to refer to the amount of resin binder, not the sum of the amount of resin binder and impregnated transparent substance.

9. The limitation "formed by compressing the conductive fine particles and the resin on the support" present in claim 1 is a product-by-process limitation that does not appear to be further limiting in so far as the structure of the product is concerned. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP § 2113.

10. With respect to these limitations, Yukinobu et al. (hereafter Yukinobu) teaches a method for making a transparent conductive film, wherein a coating

Art Unit: 1773

solution containing ultrafine particles of a conductive oxide (equivalent to applicants claimed conductive particles) is formed onto a support (equivalent to applicants claims support), and the layer is dried and rolled with a steel roller (thus meeting the compression requirement) to form a transparent conductive film (columns 2 and 3, lines 65-5). Specifically, Yukinobu teaches in examples 15-17 a method wherein a coating solution that contains ITO particles (known to be conductive) and an acrylic binder resin is applied to a polyimide support. After this solution is applied to the support, the film is then heat treated at 400⁰C, during which the acrylic resin is carbonized. Then the film is rolled under a linear pressure of 100, 200, or 300kgf/cm respectively to form a conductive film. The film is then over coated with a transparent substance (equivalent to applicants claimed impregnated transparent substance) (see columns 13-14).

11. Yukinobu does not teach that 0.03-9.3 parts by volume of the resin binder with respect to 100 parts by volume of the conductive particles is present in the film.

12. However, Yukinobu does teach that the amount of the resin binder present in the film is too much the film will not exhibit good resistivity, whereas if too little resin is utilized, the film is excessively porous and becomes hazy (column 1, lines 29-60). Thus, the amount of resin utilized in the film is a results effective variable. It is the examiners position that a after the heat treatment step utilized by Yukinobu in examples 15-18, a small residual amount of resin binder will remain.

Art Unit: 1773

13. Thus, in light of the teaching in Yukinobu that the amount of binder resin utilized impacts the properties of the transparent conductive film, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the amount of binder resin in the film of Yukinobu in order to obtain a transparent conductive film that exhibited desired resistance and haze properties.

14. Regarding the limitations of claim 2, wherein the applicant requires the transparent conductive film required by claim 8 to be formed by applying a dispersion liquid that contains the conductive fine particles and the resin, onto the support and drying the liquid, wherein the resin is contained at an amount of 73 parts by volume or less with respect to 100 parts by volume of the conductive fine particles in the dispersion liquid prior to dispersion.

15. All of the limitations of claim 2 are product by process limitations that do not appear to be further limitation insofar as far as the structure of the product is concerned. The applicant is referred to paragraph 9 above for the citation of the pertinent case law. The limitations of claim 2 are directed towards an intermediate solution that is utilized to form the applicant's end product, namely the film required by claim 8. A compressed film containing conductive particles and 0.03-9.3 parts by volume of a binder resin can be manufactured from many different solutions than that required by the applicant in claim 2. It has not yet been established on the record that the solution claimed by claim 2 imparts some structural, chemical, or physical property difference to the end product. Accordingly, the examiner takes the position that the limitations of claim 2 are met as set forth above for claim 8.

Art Unit: 1773

16. Regarding the limitations of claim 3, wherein the applicant requires the support to be a resin. Yukinobu in examples 15-18 as stated above utilizes a polyimide film as a support. Thus, this limitation is met.

Response to Arguments

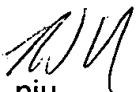
17. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

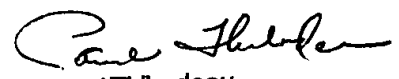
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhler whose telephone number is 703-305-0179. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0389.


nju
March 12, 2003


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700